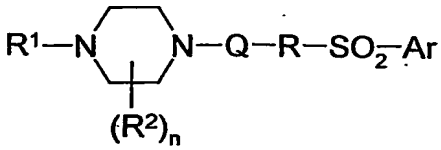
Patent claims:

1. An N-[(piperazinyl)hetaryl]arylsulfonamide compound of the general formula I



(I)

in which

R is oxygen, a group N-R^3 or a group $CR^{3a}R^{3b}$;

Q is a bivalent, 6-membered heteroaromatic radical which possesses 1 or 2 N atoms as ring members and which optionally carries one or two substituents R^a which is/are selected, independently of each other, from halogen, CN, NO_2, CO_2R^4, COR^5, C_1-C_4-alkyl, C_1-C_4-alkoxy, C_1-C_4-haloalkyl, NH_2, NHR^6, NR^6R^7 and C_1-C_4-haloalkoxy;

Ar is phenyl or a 6-membered heteroaromatic radical which possesses 1 or 2 N atoms as ring members and which optionally carries one or two substituents R^b, which is/are selected from halogen, NO_2, CN, CO_2R^4, COR^5, NH_2, NHR^6, NR^6R^7, C_1-C_6-alkyl, C_1-C_6-haloalkyl, C_1-C_6-alkoxy, C_1-C_6-haloalkoxy, C_2-C_6-alkenyl, C_2-C_6-alkynyl, C_3-C_6-cycloalkyl, C_3-C_6-cycloalkoxy, C_3-C_6-cycloalkyl-C_1-C_4-alkyl and C_1-C_4-haloalkyl, with it also being possible for two radicals R^b which are bonded to adjacent C atoms of Ar to be together C_3-C_4-alkylene;

n is 0, 1 or 2;

R^1 is hydrogen, C_1-C_4-alkyl, C_1-C_4-haloalkyl, C_3-C_6-cycloalkyl, C_3-C_6-cycloalkyl-C_1-C_4-alkyl, C_1-C_4-hydroxyalkyl, C_1-C_4-alkoxy-C_1-C_4-alkyl, C_3-C_4-alkenyl or C_3-C_4-alkynyl;

R^2 is C_1-C_4-alkyl or, together with R^1, is C_2-C_5-alkylene or, in the case of n = 2, the two radicals R^2 can together be C_1-C_4-alkylene;

R^3 is hydrogen or C_1-C_4-alkyl;

R^{3a}, R^{3b} are, independently of each other, hydrogen or C_1-C_4-alkyl;

R^4 is C_1-C_4-alkyl, C_1-C_4-haloalkyl, C_2-C_4-alkenyl C_3-C_6-cycloalkyl, C_3-C_6-cycloalkyl-C_1-C_4-alkyl, phenyl or benzyl; and

R^5 is hydrogen, C_1-C_4-alkyl, C_1-C_4-haloalkyl, C_2-C_4-alkenyl C_3-C_6-cycloalkyl, C_3-C_6-cycloalkyl-C_1-C_4-alkyl, phenyl or benzyl;

R^6, R^7 are each independently selected from C_1-C_4-alkyl, C_1-C_4-haloalkyl or together with the nitrogen to which they are bound form a saturated 3-, 4-, 5- or 6-membered heterocycle, which additionally may comprise an oxygen atom or an additional nitrogen atom as a ring member and which may carry 1, 2, 3 or 4 C_1-C_4 alkyl groups;

the N-oxides thereof and the physiologically tolerated acid addition salts of these compounds;

with the exception of the compounds: 4-methyl-N-[6-(4-methylpiperazin-1-yl)pyridin-3-yl)benzenesulfonamide and 4-chloro-N-[6-(4-methylpiperazin-1-yl)pyridin-3-yl)benzenesulfonamide.

2. The compound as claimed in claim 1, wherein R is N-R^3 with R^3 being H or C_1-C_4-alkyl.

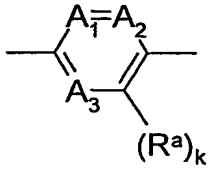
2. The compound as claimed in claim 2, wherein

Q is a bivalent, 6-membered heteroaromatic radical which possesses 1 or 2 N atoms as ring members and which optionally carries one or two substituents R^a which is/are selected, independently of each other, from halogen, CN, NO_2, CO_2R^4, COR^5, C_1-C_4-alkyl and C_1-C_4-haloalkyl and

Ar is phenyl or a 6-membered heteroaromatic radical which possesses 1 or 2 N atoms as ring members and which optionally carries one or two substituents R^b, which is/are selected from halogen, NO_2, CN, CO_2R^4, COR^5, C_1-C_6-alkyl, C_2-C_6-alkenyl, C_2-C_6-alkynyl, C_3-C_6-cycloalkyl, C_3-C_6-cycloalkyl-C_1-C_4-alkyl and C_1-C_4-haloalkyl, with it also being possible for two radicals R^b which are bonded to adjacent C atoms of Ar to be together C_3-C_4-alkylene.

3. The compound as claimed in claim 1, in which the piperazine ring is bonded to the heteroaromatic radical Q in the para position in relation to the group R-SO_2-Ar.

4. The compound as claimed in one of the preceding claims, in which Q is a radical of the formula

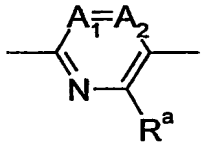


in which A_1, A_2 and A_3 are, independently of each other, N or CH, one or two of the variables A_1, A_2 and A_3 can also be C-R^a, k = 0 or 1 and R^a is selected from halogen, C_1-C_4-alkyl, C_1-C_4-haloalkyl, C_1-C_4-alkoxy, NH_2, NHR^6, NR^6R^7 and C_1-C_4-haloalkoxy, with A_1, A_2 and A_3 not simultaneously being N or simultaneously being selected from CH and C-R^a.

5. The compound as claimed in claim 4, in which A_3 is nitrogen, A_2 is CH and A_1 is N or CH and wherein the piperazine radical is located in the 2 position.

6. The compound as claimed in claim 5, in which Q is pyridin-2,5-diyl which carries the piperazine radical in the 2 position.

7. The compound as claimed in claim 5, in which Q is a radical of the formula



in which A_1 and A_2 are, independently of each other, N or CH and R^a is selected from , C_1-C_4-alkoxy, NH_2, NHR^6, NR^6R^7 and C_1-C_4-haloalkoxy.

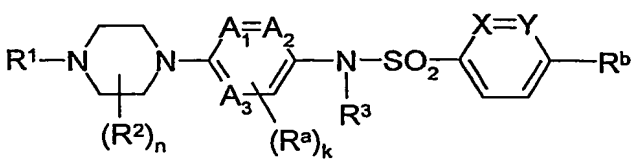
8. The compound as claimed in claim 7, in which A_1 is N or CH and A_2 is CH and wherein the piperazine radical is located in the 2 position.

9. The compound as claimed in one of the preceding claims, in which the radical Ar carries a substituent R^b in the para position and, where appropriate, a further substituent R^b in the meta position or in the ortho position, in each case based on the binding site of the sulfonamide group.

10. The compound as claimed in one of the preceding claims, in which Ar is phenyl or pyridyl, which radicals possess, where appropriate, one or 2 R^b substituents.

11. The compound as claimed in one of the preceding claims, in which R^1 is different from hydrogen and methyl.

12. The compound as claimed in claim 1 of the general formula Ia



(Ia)

in which n, R^1, R^2, R^3, R^a and R^b have the meanings given in claim 1 and in which either

A_1, A_2 and A_3 are, independently of each other, N or CH and one or two of the variables A_1, A_2 and A_3 can also be C-R^a, with A_1, A_2 and A_3 not simultaneously being N or simultaneously being selected from CH and C-R^a,

X and Y are selected from CH, C-$R^{b'}$ and N, in which $R^{b'}$ is halogen, methyl, CN, difluoromethyl or trifluoromethyl, with X and Y not simultaneously being N or simultaneously being C-$R^{b'}$, and

k is 0 or 1.

13. The compound of the formula Ia as claimed in claim 12, in which k = 0, with A_1, A_2 and A_3 being, independently of each other, N or CH and A_1, A_2 and A_3 not simultaneously being N or simultaneously being CH.

14. The compound of the formula Ia as claimed in claim 13, in which A_1 is CH or N, A_2 is CH and A_3 is N.

15. The compound of the formula Ia as claimed in claim 12, in which k is 1, A_1 is CH or N, A_2 is CH and A_3 is N, and R^a is selected from , C_1-C_4-alkoxy, NH_2, NHR^6, NR^6R^7 and C_1-C_4-haloalkoxy and R^a is bound to the carbon atom adjacent to A_3.

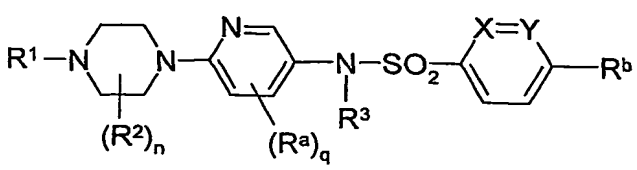
16. The compound of the formula Ia as claimed in any of claims 12 to 15, in which n is 0 or 1 and, in the case of n = 1, R^2 is bonded to the C atom of the piperazine ring which is adjacent to the group R^1-N and is a methyl group having the S configuration.

17. The compound of the formula Ia as claimed in one of claims 12 to 16, in which the radical Ar carries a substituent R^b in the para position and, where appropriate, a further substituent R^b in the meta position or in the ortho position, in each case based on the binding site of the sulfonamide group.

18. The compound of the formula Ia as claimed in one of claims 12 to 17, in which Ar is phenyl or pyridyl, which radicals possess, where appropriate, one or 2 R^b substituents.

19. The compound of the formula Ia as claimed in one of claims 12 to 18, in which R^1 is different from hydrogen and methyl.

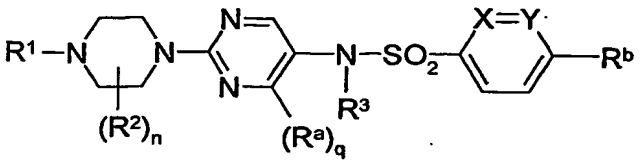
20. The compound of the formula Ia as claimed in one of claims 12 to 19, of the general formula Ia.1



(Ia.1)

in which n, X, Y, R^1, R^2, R^3, R^a and R^b have the meanings given in claim 12 and q is 0, 1 or 2.

21. The compound of the formula Ia as claimed in one of claims 12 to 19, of the general formula Ia.2

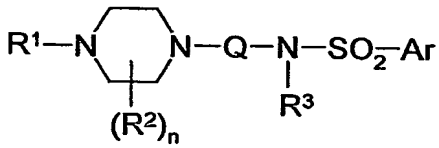


(Ia.2)

in which n, X, Y, R^1, R^2, R^3, R^a and R^b have the meanings given in claim 12 and q is 0 or 1.

22. A pharmaceutical composition which comprises at least one N-[(piperazinyl)hetaryl]arylsulfonamide compound as claimed in one of claims 1 to 21 and/or at least one physiologically tolerated acid addition salt of I and/or an N-oxide of I, where appropriate together with physiologically acceptable carriers and/or auxiliary substances.

23. The use of at least one N-[(piperazinyl)hetaryl]arylsulfonamide compound of the formula I



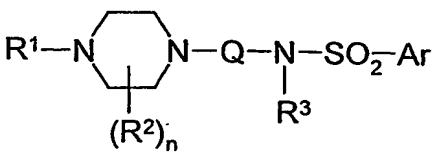
(I)

in which Q, Ar, n, R^1, R^2 and R^3 have the previously mentioned meanings, of the N-oxides thereof and of the physiologically tolerated acid addition salts thereof for producing a pharmaceutical composition for treating diseases which respond to influencing by dopamine D_3 receptor antagonists or dopamine D_3 agonists.

24. The use as claimed in claim 23 for treating diseases of the central nervous system.

25. The use as claimed in claim 23 for treating kidney function disturbances.

26. A method for treating a medical disorder susceptible to treatment with a dopamine D_3 receptor antagonist or a dopamine D_3 agonist, said method comprising administering an effective amount of at least one compound of the formula I



(I)

in which Q, Ar, n, R^1, R^2 and R^3 have the previously mentioned meanings, or the N-oxides thereof or the physiologically tolerated acid addition salts thereof to a subject in need thereof.

27. The method as claimed in Claim 26, wherein the medical disorder is a disease of the central nervous system.